AMENDMENTS

Please amend the subject patent application by amending the claims in the following manner.

IN THE CLAIMS:

5. (Once Amended) The method of claim 1, wherein the suture has a periphery and has said barbs oriented at progressively staggered positions around the periphery of the suture.

9. (Once Amended) A surgical method for bringing and holding together two tissue portions in a living patient or animal, to allow healing and regrowth together of the two tissue portions on either side of a tissue separation, comprising:

(a) at the tissue separation, inserting a surgical needle into tissue at one side of the separation, penetrating into the one tissue portion, the needle having a trailing end [secured to a one-way suture which has a multiplicity of exterior barbs providing for gripping of the tissue in one direction only, the barbs permitting movement of the suture through the tissue in the direction the needle is inserted], the surgical needle being a part of a double-armed suture which includes first and second such surgical needles oriented in opposite directions and a single suture extending between and secured to the trailing ends of the two surgical needles, the suture having said exterior barbs oriented in one direction for a first portion of the length of the suture and in the opposite direction for a remaining, second portion of the length of the suture, each portion having the barbs oriented so as to allow movement of that portion of the suture through the tissue in the same direction in which the needle secured to that portion of the suture is inserted,

(b) pushing the first surgical needle to extend along an intended line of support and then out of the tissue at a point spaced from the tissue separation, then gripping the needle from its point end and pulling the needle out of the tissue, leaving said second portion of the suture extending in the tissue separation,

(c) repeating the procedure of step (a) at the opposite side of the open wound, using the second surgical needle, at a position located across the tissue separation from the position in which the first needle was inserted,

(d) repeating step (b) at said opposite side of the tissue separation, to the extent that said second portion of the suture is drawn through tissue at said opposite side of the separation, with the second surgical needle,

(e) bringing the two tissue portions together, while drawing one or both of the surgical needles outwardly from the wound until the two portions of the suture are located substantially in respective tissue portions at opposed sides of the separation and the suture is drawn substantially tight so as to bind the two tissue portions together in a substantially closed position, and

(f) severing the suture from the two surgical needles.

62. (Once Amended) The surgical method according to [any one of claims] claim 16 for supporting skin and adjacent subcutaneous tissue of a patient in a facelift operation, wherein:

the one-way suture is a double-armed suture having a length and having barbs oriented in one direction for a first portion of the length of the suture and in a direction opposite to the one direction for a remaining second portion of the length of the suture.

Please cancel claims 28 – 57 and 66 – 73.

Please add new claims 74 – 145 as follows.

74. A method for bringing together and holding closed an open wound in human or animal flesh to allow healing and regrowth together of the two sides of the wound, comprising:

(a) in the open wound, inserting a first surgical needle into flesh at one side of the wound, penetrating into the flesh wall at the one side, the first surgical needle having a trailing end wherein a double-armed suture extends between and has its ends secured to the trailing ends of the first surgical needle and a second such surgical needle, the two needles oriented in opposite directions, the suture having said exterior barbs oriented in one direction for a first portion of the length of the suture and in the opposite direction for a second portion of the length of the suture, each portion having the barbs oriented so as to allow movement of that portion of the suture through the tissue in the same direction in which the needle secured to that portion of the suture is inserted,

(b) pushing the first needle to extend out of the flesh at a point laterally spaced from the wound on the one side, then pulling the needle out of the flesh, leaving a portion of the suture in the open wound,

(c) repeating the procedure of steps (a) and (b) at the opposite side of the open wound, with the second needle, at a position located across the wound, so that the double-armed suture has its two ends located across the wound from one another,

(d) repeating steps (a), (b) and (c) using additional double-armed sutures, each with its two ends located across the wound from one another, as necessary at further locations along the wound in accordance with the size of the wound,

(e) bringing the two sides of the wound together to bind the wound in a closed position, and

(f) severing the suture from each needle.

75. The method of claim 74, wherein the barbs extend outwardly somewhat on the suture.

76. The method of claim 74, wherein the suture has said barbs at staggered positions along the suture.

77. The method of claim 74, wherein the suture has barbs at helical positions along the suture.

78. The method of claim 74, wherein the suture has barbs at opposing positions on either side along the suture.

79. The method of claim 74, wherein the suture is about 100 to about 500 microns in diameter.

80. The method of claim 74, wherein the suture is formed of non-absorbable material.

81. The method of claim 74, wherein the suture is formed of bioabsorbable material.

82. The method of claim 74, wherein the surgical needle is a detachable needle and wherein the step of severing the suture from the needle comprises, while conducting the step of pulling the

needle out of the flesh, restraining the trailing end of the suture and pulling the needle with sufficient force to detach it from the suture at a position wherein the leading end of the suture is well below the surface of the flesh, thereby leaving the leading end of the suture within the flesh.

83. The method of claim 82, wherein the base end of the detachable needle has markings as a visual reference for a surgeon, and including the surgeon's predetermining the depth of needle-suture severing by detaching the needle at a desired depth by reference to the markings.

84. The method of claim 74, wherein the suture has a leading end region free of barbs, and wherein the step of pulling the needle out of the flesh comprises pulling the barb free leading end of the suture toward the surface of the flesh, leaving the barbs well below the surface of the flesh so as to avoid downward tension at or near the surface of the skin.

85. A surgical method for supporting skin and adjacent subcutaneous tissue of a patient in a facelift operation, comprising:

selecting one or more paths through the patient's tissue on which lines of tissue support are desired;

selecting a first surgical needle of sufficient length to be inserted through a first of such selected paths in the tissue, the first surgical needle having a trailing end wherein a double-armed suture extends between and has its ends secured to the trailing ends of the first surgical needle and a second such surgical needle, the two needles oriented in opposite directions, the suture having said exterior barbs oriented in one direction for a first portion of the length of the suture and in the opposite direction for a second portion of the length of the suture, each portion having the barbs oriented so as to allow movement of that portion of the suture through the tissue in the same direction in which the needle secured to that portion of the suture is inserted;

pushing the first needle into the tissue, below the skin and along the selected path for the desired line of tissue support, until the first needle extends out through the skin at a distal end of the selected path;

pulling the first needle out of the patient's tissue, leaving the first portion of the suture lying within the tissue along the selected path;

as needed for the particular facelift operation, inserting the second needle in an additional selected path for an additional desired line of tissue support, to place the second portion of the suture below the skin at said additional desired line of tissue support, until the second needle extends out through the skin at a distal end of the additional selected path;
pulling the second needle out of the patient's tissue, leaving the second portion of the suture lying within the tissue along the additional selected path;
applying tension to the suture, to engage the barbs against the internal tissue along said one or more desired lines of tissue support, in the tensioned condition, such that the desired lines of support are placed in tension to provide the desired tissue support, and
severing the suture from each needle.

86. The surgical method of claim 85, wherein the surgical needles are detachable needles which detach from the suture under a prescribed degree of pulling force, and wherein the step of severing the sutures from the needles comprises, while conducting the step of pulling each needle out of the tissue, restraining the suture and pulling each needle with sufficient force to detach each needle from the suture at a position wherein the trailing end of each needle is at a selected depth below the surface of the skin, thereby leaving the suture at said selected depth.

87. The surgical method of claim 85, wherein each surgical needle has near its trailing end markings as a visual reference for a surgeon, and including the surgeon's predetermining the depth of needle-suture severing by detaching each needle at a desired depth by reference to the markings.

88. The method of claim 85, wherein the barbs extend outwardly somewhat on the suture.

89. The method of claim 85, wherein the suture has said barbs at staggered positions along the suture.

90. The method of claim 85, wherein the suture has barbs at helical positions along the suture.

91. The method of claim 85, wherein the suture has barbs at opposing positions on either side along the suture.

92. The method of claim 85, wherein the suture is about 100 to about 500 microns in diameter.

93. The method of claim 85, wherein the suture is formed of non-absorbable material.

94. The method of claim 85, wherein the suture is formed of bioabsorbable material.

95. A surgical method for bringing and holding together two tissue portions in a living patient, to allow healing and regrowth together of the two tissue portions on either side of a tissue separation, comprising:

(a) at the tissue separation, inserting a first surgical needle into tissue at one side of the separation, penetrating into the one tissue portion, the first surgical needle having a trailing end wherein a double-armed suture extends between and has its ends secured to the trailing ends of the first surgical needle and a second such surgical needle, the two needles oriented in opposite directions, the suture having said exterior barbs oriented in one direction for a first portion of the length of the suture and in the opposite direction for a second portion of the length of the suture, each portion having the barbs oriented so as to allow movement of that portion of the suture through the tissue in the same direction in which the needle secured to that portion of the suture is inserted,

(b) pushing the first needle to extend along an intended line of support and then out of the tissue at a point spaced from the tissue separation, then gripping the first needle from its point end and pulling the first needle out of the tissue, leaving the first portion of the suture in the tissue separation,

(c) repeating the procedure of steps (a) and (b) at the opposite side of the tissue separation, in the other tissue portion, with the second needle at a position located across the tissue separation,

(d) repeating steps (a), (b) and (c) using additional double-armed sutures as necessary at further locations in the tissue separation depending on the size of the tissue separation,

(e) bringing the two tissue portions together to bind the tissue separation in a closed position to facilitate regrowth together of the two tissue portions, and

(f) severing the suture from each needle.

96. The surgical method of claim 95, wherein the two tissue portions comprise sections of a tendon of the patient.

97. The surgical method of claim 95, wherein the two tissue portions comprise two sides of an open wound at the skin of a patient, and wherein the step of severing the sutures comprises severing the sutures below the skin surface.

98. The surgical method of claim 95, wherein each surgical needle is a detachable needle, detachable from the suture with a prescribed pulling force, and wherein the step of severing the suture from each needle comprises, while conducting the step of pulling each needle out of the tissue, pulling each needle with sufficient force to detach it from the suture at a position wherein the trailing end of each needle is well below the surface of the tissue, thereby leaving the suture well below the surface of the tissue.

99. The method of claim 95, wherein the barbs extend outwardly somewhat on the suture.

100. The method of claim 95, wherein the suture has said barbs at staggered positions along the suture.

101. The method of claim 95, wherein the suture has barbs at helical positions along the suture.

102. The method of claim 95, wherein the suture has barbs at opposing positions on either side along the suture.

103. The method of claim 95, wherein the suture is about 100 to about 500 microns in diameter.

104. The method of claim 95, wherein the suture is formed of non-absorbable material.

105. The method of claim 95, wherein the suture is formed of bioabsorbable material.

106. A suture comprising:
a one-way suture having a series of exterior barbs providing for gripping of tissue in one direction only, wherein the barbs have a pre-selected depth from about 30 microns to about 100 microns, and having a leading end, the barbs permitting movement of the suture through tissue in the direction of the leading end.

107. The suture of claim 106, wherein the barbs extend outwardly somewhat on the suture.

108. The suture of claim 106, wherein the barbs are at staggered positions along the suture.

109. The suture of claim 106, wherein the barbs are at helical positions along the suture.

110. The suture of claim 106, wherein the barbs are at opposing positions on either side along the suture.

111. The suture of claim 106, wherein the suture is about 100 to about 500 microns in diameter.

112. The suture of claim 106, wherein the suture is formed of non-absorbable material.

113. The suture of claim 106, wherein the suture is formed of bioabsorbable material.

114. A suture comprising:
a one-way suture having a series of exterior barbs providing for gripping of tissue in one direction only, and having a leading end, the barbs permitting movement of the suture through tissue in the direction of the leading end, and a surgical needle having a trailing end secured to the one-way suture.

115. The suture of claim 114, wherein the barbs extend outwardly somewhat on the suture.

116. The suture of claim 114, wherein the barbs are at staggered positions along the suture.

117. The suture of claim 114, wherein the barbs are at helical positions along the suture.

118. The suture of claim 114, wherein the barbs are at opposing positions on either side along the suture.

119. The suture of claim 114, wherein the suture is about 100 to 500 microns in diameter.

120. The suture of claim 114, wherein the suture is formed of non-absorbable material.

121. The suture of claim 114, wherein the suture is formed of bioabsorbable material.

122. A suture comprising:
a suture having a length and having barbs oriented in one direction for a first portion of the length of the suture and in a direction opposite to the one direction for a second portion of the length of the suture, wherein the barbs have a pre-selected depth from about 30 microns to about 100 microns.

123. The suture of claim 122, wherein the barbs extend outwardly somewhat on the suture.

124. The suture of claim 122, wherein the barbs are at staggered positions along the suture.

125. The suture of claim 122, wherein the barbs are at helical positions along the suture.

126. The suture of claim 122, wherein the barbs are at opposing positions on either side along the suture.

127. The suture of claim 122, wherein the suture is about 100 to about 500 microns in diameter.

128. The suture of claim 122, wherein the suture is formed of non-absorbable material.

129. The suture of claim 122, wherein the suture is formed of bioabsorbable material.

130. A suture comprising:
a suture having a length and having barbs oriented in one direction for a first portion of the length of the suture and in a direction opposite to the one direction for a second portion of the length of the suture, and a first surgical needle having a trailing end secured to the suture.

131. The suture of claim 130, wherein the barbs extend outwardly somewhat on the suture.

132. The suture of claim 130, wherein the barbs are at staggered positions along the suture.

133. The suture of claim 130, wherein the barbs are at helical positions along the suture.

134. The suture of claim 130, wherein the barbs are at opposing positions on either side along the suture.

135. The suture of claim 130, wherein the suture is about 100 to about 500 microns in diameter.

136. The suture of claim 130, wherein the suture is formed of non-absorbable material.

137. The suture of claim 130, wherein the suture is formed of bioabsorbable material.

138. The suture of claim 130, further including a second such surgical needle having a trailing end and oriented in an opposite direction from the first surgical needle, and wherein the suture extends between and is secured to the trailing ends of the two surgical needles.

139. The suture of claim 138, wherein the barbs extend outwardly somewhat on the suture.

140. The suture of claim 138, wherein the barbs are at staggered positions along the suture.

141. The suture of claim 138, wherein the barbs are at helical positions along the suture.

142. The suture of claim 138, wherein the barbs are at opposing positions on either side along the suture.

143. The suture of claim 138, wherein the suture is about 100 to about 500 microns in diameter.

144. The suture of claim 138, wherein the suture is formed of non-absorbable material.

145. The suture of claim 138, wherein the suture is formed of bioabsorbable material.